

Work Order ID 62385

September 29, 2010 9:15:36 AM



Page 1

| | | | | | | |
|----------------|----------|-----------------|--|---------------|-------|--|
| Item ID: | D2197-1 | Accept | | Setup | Start | |
| Revision ID: | | | | | Stop | |
| Item Name: | Bracket | | | | | |
| Start Date: | 9/29/10 | Start Qty: 2.00 | | Cust Item ID: | | |
| Required Date: | 10/08/10 | Req'd Qty: 2.00 | | Customer: | | |
| Reference: | | | | | | |

| | | | | | | | | | | | |
|------------|---------------|-----------|-------|----------------|------------|--|-------|--|-----|-------|--|
| Approvals: | Process Plan: | <u>CZ</u> | Date: | <u>10/9/29</u> | Tooling: | | Date: | | Run | Start | |
| | QC: | | Date: | | SPC (Y/N): | | Date: | | | Stop | |

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr | Revision Nbr | | | | | | | | |
| D2197 | Rev C | | | | | | | | |

| | | | | | | | | | |
|-------------------|--|---|------|--|--|--|--|--|--|
| 100 | | FLOW WATER JET | 0.00 | | | | | | |
| Waterjet | | Memo | 0.00 | | | | | | |
| FLOW CNC Waterjet | | 1-Cut as per Dwg D2196 <input type="checkbox"/> Dwg Rev: <u>C</u> <input type="checkbox"/> Prog Rev: <u>C</u> <input type="checkbox"/> 2- | | | | | | | |
| 304.063 | | Deburr if necessary | | | | | | | |

| | | | | | | | | | |
|-----------------|--|---|------|--|--|--|--|--|--|
| 110 | | QC2- Inspect parts off machine FAI/FAIB | 0.00 | | | | | | |
| QC | | Memo | 0.00 | | | | | | |
| Quality Control | | | | | | | | | |

| | | | | | | | | | |
|-----------------|--|-----------------------------------|------|--|--|--|--|--|--|
| 120 | | QC8- Inspect parts - second check | 0.00 | | | | | | |
| QC | | Memo | 0.00 | | | | | | |
| Quality Control | | | | | | | | | |

B10-9-30

B10-9-30

S 10/10/10

(23)

Pho →

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: D2197-1 PAR #: _____ Fault Category: Small / TU Jet NCR: Yes No DQA: 1 Date: 10/10/07
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: 10/10/07 Date: 10/10/07

| NCR: 62385 | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------------|------|--|-----------------------------|---|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| 10/10/07 | #170 | During inspection found Qty 2 parts that are scrap. 1 part has cut out in part from w/s. R.C. part moved during cutting outside profile. | | → Scrap + Destroy no replace (extras were made). | 10/10/07 | 10-10-07 | | 10/10/07 |
| | | 1 part hole pattern is off. R.C. part moved during cutting outside profile. | | → Keep 1 (with cut out) for QC inspection template. | 10/10/07 | 10-10-07 | | 10/10/07 |
| | | | | | | | | |

NOTE: Date & initial all entries

Work Order ID 62385

September 29, 2010 9:15:36 AM



Page 2

Item ID: D2197-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Bracket

Start Date: 9/29/10 Start Qty: 2.00



Cust Item ID:

Required Date: 10/08/10 Req'd Qty: 2.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

130



Brake NC

NC BRAKE

0.00

Memo

0.00

Brake NC

Bend as per dwg D2196

8/10/10/06

3

140



QC

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Quality Control

8/10/10/06

x3
-1

150



Packaging

Identify as per dwg & Stock Location: 8

0.00

Memo

0.00

Packaging

10/10/10 30 SP

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Work Order ID 62385

September 29, 2010 9:15:36 AM



Page 3

Item ID: D2197-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Bracket

Start Date: 9/29/10 Start Qty: 2.00



Cust Item ID:

Required Date: 10/08/10 Req'd Qty: 2.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/16/09 [Signature]
MF
10-10-06

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

September 29, 2010 9:15:36 AM

Page 1

Work Order ID: 62385



Parent Item: D2197-1



Parent Item Name: Bracket

Start Date: 9/29/10

Required Date: 10/08/10

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A 08-07-24 new issue ec verified by:dd

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

M304S16GA

Purchased

No

100

sf

123.9100

0.1388

0.292211

7



10-9-30

304/316 Sheet .063

Location

Loc Qty

Loc Code

MAT

117.37

111323

0

115688

117.37

MAT20

6.54

115440

6.54

115688

5

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

| | | |
|------------------------------|---------------|-----------------------------|
| DART AEROSPACE LTD | | Work Order: 62385 |
| Description: Bracket | | Part Number: D2197-1 |
| Inspection Dwg: D2197 | Rev: C | Page 1 of 1 |

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|---------------|------------------|--------|--------|----------------------|----------|
| Ø0.128 | +0.005/-0.001 | .130 | X | | V HB02 | |
| Ø0.203 | +0.005/-0.001 | .205 | X | | V | |
| Ø0.257 | +0.006/-0.001 | .257 | X | | V | |
| 0.300 | +/-0.010 | .300 | X | | V | |
| 0.375 | +/-0.010 | .377 | X | | V | |
| 0.500 | +/-0.010 | .500 | X | | V | |
| 1.200 | +/-0.010 | 1.204 | X | | V | |
| 2.390 | +/-0.010 | 2.394 | X | | V | |
| 3.280 | +/-0.010 | 3.284 | X | | V | |
| 4.480 | +/-0.010 | 4.479 | X | | V | |
| 4.980 | +/-0.010 | 4.980 | X | | V | |
| 0.500 | +/-0.010 | .500 | X | | V | |
| 0.813 | +/-0.010 | .815 | X | | V | |
| 1.750 | +/-0.010 | 1.751 | X | | V | |
| 2.688 | +/-0.010 | 2.688 | X | | V | |
| 3.625 | +/-0.010 | 3.629 | X | | V | |
| 4.000 | +/-0.010 | 4.005 | X | | V | |
| 0.063 | +/-0.010 | .059 | X | | V | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| | | |
|------------------------|-----------------------|--------------------------------|
| Measured by: RB | Audited by: J | Prototype Approval: N/A |
| Date: 10-9-30 | Date: 10/10/01 | Date: N/A |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|-----------|------------|----------|
| A | 08.08.27 | New Issue | KJ/DD | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries



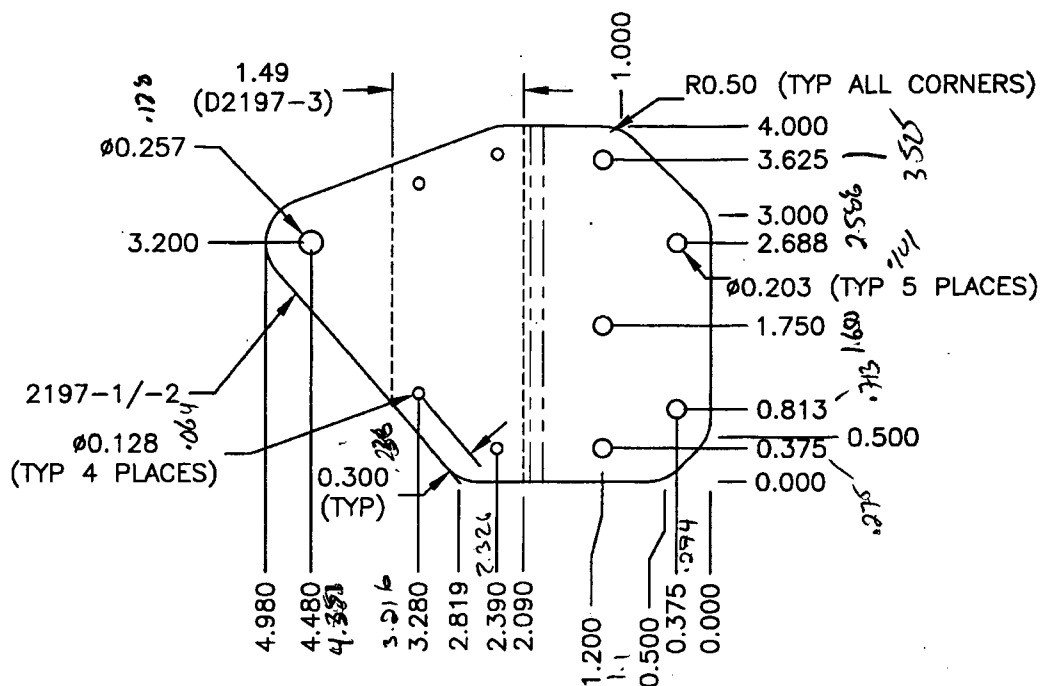
| | | | |
|-------------------------------|--------------------------------|---|------------------------|
| DESIGN <i>[Signature]</i> | DRAWN BY <i>[Signature]</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>[Signature]</i> | APPROVED <i>[Signature]</i> | DRAWING NO. D2197 | REV. C SHEET 1 OF 1 |
| DATE 03.05.28 | | TITLE BRACKET | SCALE 1:2 |
| B | 93.09.23 | REDESIGN | |
| C | 03.05.28 | REDRAW; D2197-3 NOW 0.5" THICK | |

RELEASED
03.07.09

UNDER REVIEW

[Signature] 09.11.12
NCR 08-110
OK *[Signature]* 10.08.28

D2197-1/-2/-3
FLAT PATTERN



D2197-1/-2

- 1) MATERIAL: AISI 304/316 S.S.
0.064" THICK (M304S16GA)

D2197-3

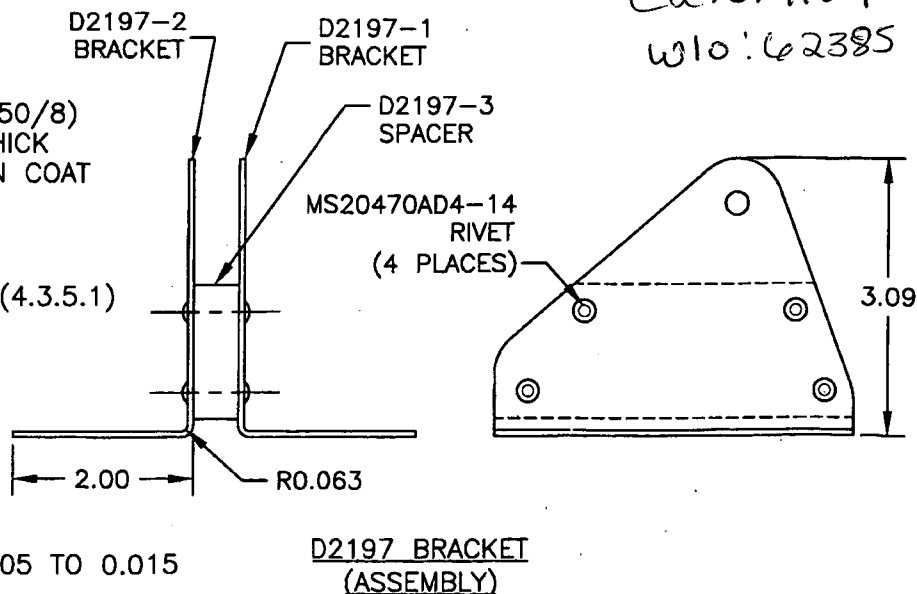
- 2) MATERIAL: 5052H32 (QQ-A-250/8)
0.500" THICK OR 4x0.125 THICK
- 3) FINISH: CHEMICAL CONVERSION COAT
PER DART QSI 005 4.1

D2197 BRACKET (ASSEMBLY):

- 4) FINISH: POWDER COAT WHITE (4.3.5.1)
PER DART QSI 005 4.3

GENERAL NOTES:

- 5) ALL DIMENSIONS ARE IN INCHES
- 6) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 7) BREAK ALL SHARP EDGES 0.005 TO 0.015



D2197 BRACKET
(ASSEMBLY)

Copyright © 2003 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.